

ATC Results for the RC Millimole Regression**2000 mg/kg Upper Limit****Results for 46 chemicals for the 3T3 NRU and 47 chemicals for the NHK NRU
(see notes to Table 6-4 for chemicals excluded)****Summary of Animals Used and Deaths by Cell Type**

Cell Type	Sigma	Method	No. Animals Dead	% Deaths	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings
NHK	0.12	Cyto	2.34	24.4%	0.340	9.57	1.27	0.0018	11.7%
		Default	2.97	27.4%	0.208	10.84			
	0.25	Cyto	2.49	25.9%	0.322	9.61	1.26	0.0075	11.6%
		Default	3.14	28.9%	0.189	10.87			
	0.5	Cyto	2.82	29.0%	0.299	9.72	1.21	0.0003	11.1%
		Default	3.47	31.8%	0.155	10.93			
	1.25	Cyto	3.55	35.9%	0.236	9.90	1.10	0.0002	10.0%
		Default	4.24	38.5%	0.094	11.00			
	2	Cyto	3.91	38.8%	0.221	10.07	1.03	0.0006	9.3%
		Default	4.57	41.1%	0.065	11.10			
Average Animal Difference: 1.17									
3T3	0.12	Cyto	2.38	24.7%	0.364	9.64	1.17	0.0012	10.8%
		Default	3.03	28.0%	0.211	10.81			
	0.25	Cyto	2.54	26.2%	0.353	9.66	1.17	0.0012	10.8%
		Default	3.21	29.6%	0.191	10.84			
	0.5	Cyto	2.87	29.4%	0.329	9.76	1.13	0.0003	10.4%
		Default	3.55	32.6%	0.157	10.90			
	1.25	Cyto	3.60	36.2%	0.267	9.95	1.03	0.0001	9.4%
		Default	4.29	39.1%	0.096	10.98			
	2	Cyto	3.96	39.1%	0.242	10.11	0.99	< .0001	8.9%
		Default	4.61	41.6%	0.067	11.10			
Average Animal Difference: 1.10									

Summary of Animals Used by GHS Toxicity Category and Cell Type

Category	Cell Type	Sigma	Method	No. Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings
1	NHK	0.12	Cyto	7.23	1.043	7.25	1.75	0.1094	19.5%
			Default	8.98	0.002	9.00			
		0.25	Cyto	7.10	1.083	7.34	1.76	0.0781	19.3%
			Default	8.85	0.052	9.09			
		0.5	Cyto	6.90	1.116	7.62	1.76	0.0781	18.7%
			Default	8.66	0.115	9.37			
		1.25	Cyto	6.48	1.101	8.34	1.70	0.1094	17.0%
			Default	8.10	0.121	10.04			
		2	Cyto	6.21	1.097	8.84	1.73	0.1563	16.4%
			Default	7.69	0.098	10.57			
Average Animal Difference:								1.74	
2	3T3	0.12	Cyto	6.18	0.881	6.20	2.80	0.0156	31.1%
			Default	8.97	0.001	9.00			
		0.25	Cyto	6.05	0.880	6.28	2.80	0.0156	30.8%
			Default	8.85	0.047	9.09			
		0.5	Cyto	5.89	0.866	6.60	2.75	0.0156	29.5%
			Default	8.65	0.111	9.35			
		1.25	Cyto	5.54	0.875	7.28	2.74	0.0156	27.4%
			Default	8.10	0.114	10.02			
		2	Cyto	5.34	0.888	7.76	2.83	0.0156	26.7%
			Default	7.69	0.092	10.59			
Average Animal Difference:								2.79	
2	NHK	0.12	Cyto	2.94	0.176	9.35	2.79	0.0625	23.0%
			Default	5.82	0.085	12.14			
		0.25	Cyto	2.92	0.277	9.62	2.55	0.0625	21.0%
			Default	5.70	0.065	12.17			
		0.5	Cyto	3.20	0.337	9.77	2.43	0.0625	19.9%
			Default	5.86	0.039	12.20			
		1.25	Cyto	3.78	0.362	9.07	2.94	0.0625	24.5%
			Default	6.31	0.076	12.01			
		2	Cyto	3.84	0.371	8.56	3.30	0.0625	27.8%
			Default	6.33	0.040	11.85			
Average Animal Difference:								2.80	
2	3T3	0.12	Cyto	4.31	1.003	10.71	1.42	0.3125	11.7%
			Default	5.82	0.080	12.13			
		0.25	Cyto	4.24	0.957	10.92	1.24	0.3125	10.2%
			Default	5.68	0.063	12.16			
		0.5	Cyto	4.57	0.935	11.12	1.10	0.4375	9.0%
			Default	5.89	0.052	12.22			
		1.25	Cyto	5.17	0.996	10.67	1.33	0.4375	11.1%
			Default	6.30	0.055	11.99			
		2	Cyto	5.18	1.077	10.26	1.62	0.1875	13.7%
			Default	6.33	0.046	11.88			
Average Animal Difference:								1.34	

Summary of Animals Used by GHS Toxicity Category and Cell Type

Category	Cell Type	Sigma	Method	No. Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings
3	NHK	0.12	Cyto	3.04	0.779	9.97	-0.23	>.9999	-2.4%
			Default	3.55	0.490	9.74			
		0.25	Cyto	3.04	0.531	9.98	0.16	>.9999	1.6%
			Default	3.73	0.494	10.15			
		0.5	Cyto	3.27	0.356	10.32	0.43	>.9999	4.0%
			Default	4.13	0.388	10.75			
		1.25	Cyto	3.80	0.252	10.46	1.17	0.0625	10.0%
			Default	4.95	0.166	11.63			
		2	Cyto	4.07	0.377	10.14	1.62	0.0313	13.8%
			Default	5.34	0.065	11.75			
Average Animal Difference:								0.63	
4	3T3	0.12	Cyto	3.05	0.158	9.39	0.32	>.9999	3.3%
			Default	3.54	0.477	9.72			
		0.25	Cyto	3.06	0.139	9.62	0.51	0.8438	5.1%
			Default	3.73	0.476	10.14			
		0.5	Cyto	3.25	0.078	10.01	0.69	0.3125	6.5%
			Default	4.15	0.373	10.70			
		1.25	Cyto	3.85	0.237	10.39	1.25	0.0313	10.8%
			Default	4.98	0.165	11.64			
		2	Cyto	4.19	0.299	10.28	1.48	0.0313	12.6%
			Default	5.35	0.067	11.75			
Average Animal Difference:								0.85	
5	NHK	0.12	Cyto	3.03	0.125	9.28	-0.06	0.6875	-0.7%
			Default	3.04	0.125	9.21			
		0.25	Cyto	3.03	0.137	9.47	-0.05	0.2969	-0.6%
			Default	3.02	0.136	9.42			
		0.5	Cyto	3.13	0.082	9.81	-0.02	0.9375	-0.2%
			Default	3.13	0.082	9.79			
		1.25	Cyto	3.66	0.061	10.58	-0.01	0.5781	-0.1%
			Default	3.66	0.071	10.57			
		2	Cyto	4.11	0.068	11.10	-0.04	0.2188	-0.4%
			Default	4.10	0.073	11.05			
Average Animal Difference:								-0.04	
6	3T3	0.12	Cyto	3.03	0.270	9.67	-0.47	0.0625	-5.1%
			Default	3.03	0.114	9.20			
		0.25	Cyto	3.03	0.247	9.79	-0.38	0.0156	-4.0%
			Default	3.03	0.129	9.41			
		0.5	Cyto	3.16	0.144	10.04	-0.24	0.5781	-2.5%
			Default	3.13	0.084	9.79			
		1.25	Cyto	3.64	0.096	10.69	-0.13	0.0313	-1.3%
			Default	3.64	0.073	10.55			
		2	Cyto	4.05	0.059	11.04	0.03	0.6875	0.2%
			Default	4.10	0.093	11.06			
Average Animal Difference:								-0.24	

Summary of Animals Used by GHS Toxicity Category and Cell Type

Category	Cell Type	Sigma	Method	No. Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings
5	NHK	0.12	Cyto	0.47	0.507	11.17	0.73	0.0977	6.2%
			Default	0.47	0.042	11.90			
		0.25	Cyto	1.18	0.380	11.05	0.54	0.4522	4.7%
			Default	1.18	0.092	11.59			
		0.5	Cyto	1.86	0.269	10.81	0.38	0.0166	3.4%
			Default	1.85	0.088	11.19			
		1.25	Cyto	2.90	0.131	10.59	0.18	0.2061	1.7%
			Default	2.89	0.038	10.77			
		2	Cyto	3.39	0.053	10.77	0.07	0.5772	0.7%
			Default	3.37	0.019	10.84			
Average Animal Difference:								0.38	
6	3T3	0.12	Cyto	0.47	0.198	11.55	0.35	0.0488	2.9%
			Default	0.46	0.044	11.90			
		0.25	Cyto	1.18	0.170	11.32	0.27	0.0674	2.3%
			Default	1.18	0.095	11.59			
		0.5	Cyto	1.85	0.128	11.02	0.16	0.1231	1.4%
			Default	1.86	0.079	11.18			
		1.25	Cyto	2.91	0.062	10.68	0.07	0.1055	0.7%
			Default	2.90	0.041	10.75			
		2	Cyto	3.39	0.027	10.82	0.002	0.8311	0.0%
			Default	3.36	0.014	10.83			
Average Animal Difference:								0.17	
7	NHK	0.12	Cyto	0.00	0.899	9.52	2.48	0.0547	20.6%
			Default	0.00	0.000	12.00			
		0.25	Cyto	0.05	0.894	9.51	2.49	0.0547	20.8%
			Default	0.04	0.000	12.00			
		0.5	Cyto	0.56	0.851	9.58	2.34	0.0322	19.7%
			Default	0.57	0.019	11.92			
		1.25	Cyto	2.04	0.541	9.86	1.46	0.0830	12.9%
			Default	2.17	0.048	11.32			
		2	Cyto	2.79	0.343	10.15	0.89	0.1016	8.0%
			Default	2.86	0.023	11.04			
Average Animal Difference:								1.93	
8	3T3	0.12	Cyto	0.00	0.966	9.54	2.46	0.0273	20.5%
			Default	0.00	0.000	12.00			
		0.25	Cyto	0.05	0.961	9.52	2.48	0.0273	20.7%
			Default	0.05	0.001	12.00			
		0.5	Cyto	0.59	0.910	9.58	2.32	0.0195	19.5%
			Default	0.61	0.026	11.90			
		1.25	Cyto	2.06	0.575	9.86	1.43	0.0273	12.6%
			Default	2.19	0.048	11.29			
		2	Cyto	2.80	0.353	10.13	0.86	0.0645	7.8%
			Default	2.90	0.026	10.99			
Average Animal Difference:								1.91	

Notes:

*P-Value is from one-side Wilcoxon Signed Ranked test for difference in animal use between the default and cytotoxicity methods. **Boldfaced** values are significant values at p< 0.05.

Numbers are numbers of animals unless otherwise specified

Sigma - reciprocal of slope

Cyto= using NRU-determined starting dose

Default - using default starting dose of 175 mg/kg